

What is Claimed is:

1. A bottle blow molded from a parison of thermoplastic resin, said bottle comprising:

a bottle body integrally formed with a first dome, a second dome and a collapsed passage between said first dome and said second dome, said collapsed passageway forming a seal and having one side of said passageway displaced laterally against an opposing side thereof and having defined therein a pair of adjacent indentations into the thermoplastic resin.

2. A bottle as claimed in Claim 1 wherein said seal includes molecular seals adjacent to said indentations.

3. A bottle as claimed in Claim 1 wherein said indentations are formed on a common side of said collapsed passage.

4. A bottle as claimed in Claim 1 wherein said indentations extend across a lateral width of said collapsed passage.

5. A bottle as claimed in claim 4 wherein said indentations extend completely across said lateral width of said collapsed passage.

6. A bottle as claimed in Claim 1 further comprising a dam between said indentations, said dam being a built-up formation of material displaced during forming of said indentations and having a thickness greater than a remainder of said collapsed passageway.

7. A bottle as claimed in Claim 1 wherein said bottle is aseptic and unfilled.

11

8. An apparatus for in mold sealing of a bottle blow molded from a parison of thermoplastic resin, said apparatus comprising:

a pair of mold halves including surfaces that when closed define a cavity, first and second dome recesses, and a passageway connecting said first and second domes recesses; and

a sealing tool movably mounted to one of said mold halves and being moveable to extend into said passageway, said tool having a pair of spaced apart blades formed on a distal end thereof, in a retracted position of said tool said blades being substantially withdrawn from said passageway, in an extended position of said tool said blades extending partway across said passageway to position compressing and penetrating into a portion of a parison to form a seal with molecular sealing therein

9. An apparatus as claimed in Claim 8 wherein each of said blades includes a tip, said tip having chamfered sides.

10. An apparatus as claimed in Claim 9 wherein said tip includes a central flat land between said chamfered sides.

11. An apparatus as claimed in Claim 8 wherein said blades are transversely oriented relative to said passageway.

12. An apparatus as claimed in Claim 8 wherein when said tool is in said extended position said tips of said blades are positioned only partway across said passageway.

13. An apparatus as claimed in Claim 8 further comprising a first actuator for closing and opening said mold halves, a second actuator for extending and retracting said tools and means for inflating said parison.

14. An apparatus as claimed in Claim 8 wherein said blades are spaced longitudinally apart along said passageway.

15. A method of forming a sealed, hollow aseptic container from a parison of thermoplastic material, comprising the steps of:

introducing a molten parison between a pair of open mold halves;

closing the mold halves to capture the parison in a mold cavity having the shape of a container;

flowing pressurized air into the interior of the captured parison to expand the walls of the parison against the mold cavity thereby forming an expanded parison in the shape of the mold cavity;

reducing the pressure within the expanded parison;

collapsing a portion of the expanded parison; and

forming at least one molecular seal in the collapsed portion of the parison.

16. A method as claimed in Claim 15 wherein said collapsing step further includes the step of advancing a tool having a pair of spaced apart blades on the end thereof, said blades engaging the parison.

17. A method as claimed in Claim 16 wherein said blades completely collapse said parison.

18. A method as claimed in Claim 16 wherein said forming step further comprises the step of penetrating said blades into the completely collapsed parison and forming indentations therein.

19. A method as claimed in Claim 18 wherein said penetrating step causes a built-up formation of material between the indentations.

20. A method as claimed in Claim 19 wherein the formation of material is built-up to a thickness greater than remaining portions of the collapsed portion of the parison.

11/27/2019 10:00 AM